

Notes on the Synonymy of some Tortricina (Lep.).

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(With 2 figures.)

The present paper deals with the synonymy of some European *Tortricina* in order to decide which trivial name has to be accepted for each of them to obtain agreement with the rules of Nomenclature, without making more inconvenience of changing names than is inevitable.

For kind permission to examine the Fabrician types in the collection of the Zoological Museum of Copenhagen I am indebted to the Direction of that Museum. Upon this and many other occasions Dr. S. L. Tuxen has most readily given me any possible practical aid. Further I greatly acknowledge the valuable assistance given by Mr. J. D. Bradley of the British Museum (Natural History) in London who has helped me in various ways, and Dr. H. Lemche of the Zoological Museum of Copenhagen for helpful comments on questions of Nomenclature. Finally my thanks go to Dr. Gozmány of the Hungarian Natural History Museum in Budapest, who in a most generous way has made an examination of some of Treitschke's types possible to me.

Authors' names are not abbreviated. An author's name in brackets following a trivial name indicates, as usual, that the author in question has named the species under another genus than that preceding the cited trivial name. If two dates are quoted the first indicates the year in which the cited part of the publication appeared, the second (in brackets) means the year printed on the front page of the cited book.

The species treated are: 1. *Cnephasia pascuana* (Hübner), 2. *Olindia schumacherana* (Fabricius), 3. *Acleris tripunctulana* (Haworth), 4. *Acleris ferrugana* (Treitschke), 5. *Eucosma tripoliana* (Barrett), 6. *Eucosma latiorana* (Herrich-Schäffer), and 7. *Argyroploce porphyhana* (Hübner).

1. *Cnephasia pascuana* (Hübner 1796/9, nom. emend.) (*Cnephasia pasivana* auctt.).

One of the species belonging to the '*Tortrix wahlbomiana*' group, the genitalia of which are figured by e.g. Pierce & Metcalfe (1922, Genit. Tortr. pl. 4, amid) have been traced back to the species figured by Hüb-

ner (1796/9, Samml. Eur. Schmett. Tortr. pl. 16, fig. 99). This figure agrees moderately with the species in question, and from a practical point of view it will serve no purpose to make any doubt of the matter instead of simply accepting the name attached by Hübner to this figure. Even when doing so, a number of different names can be, and in fact still are, used, all referring to the said figure, and a definite choice between these names becomes necessary.

The name attached to Hübner's pl. 16, fig. 99 is—in the first, and probably in most of the copies—*pasiuana*. Supposing some *lapsus calami* having occurred in the spelling of this name, the letter *u* was generally by subsequent authors changed into the letter *v*, and the name *pasivana* became the most commonly used trivial name of this species. It is used in this spelling by e.g. Herrich-Schäffer (1851 (1849), Syst. Bearb. Schmett. Eur. 4: 201), von Heinemann (1863, Schmett. Deutschl. Schw. 2 (1): 62), von Kennel in Spuler (1907 (1910), Schmett. Eur. 2: 253, but here wrongly attached to another species), Larsen (1916, Ent. Medd. 11: 82), Pierce & Metcalfe (1922, Genit. Tortr.: 11), Petersen (1924, Lep. Faun. Estl. 2: 433), Benander (1946, Opusc. Ent.: 18), and as late as 1950, *Enum. Ins. Fenn. Suec.* 1 (2): 10.

Hübner himself became aware of the spelling *pasiuana* being a misprint and therefore makes a correction, changing, not the letter *u* to *v*, but the letter *i* to *c*, which appears from the following statement of Treitschke (1830, Schmett. Eur. 8: 173): 'Pasivana heisst auf mehreren Abdrücken der Kupfertafel, und im »Werz. bek. Schmettl. S. 382. N. 3698.« Pascuana'. Correspondingly Zeller (1878, Stett. ent. Z. 39: 101) states: 'Pasivana, wie gewöhnlich geschrieben wird, steht nicht einmal auf meiner Tafel des Hübner'schen Werkes, sondern dafür Pasiuana. Treitschke sagt ... etc.'

The name *pascuana* is used by e.g. Meyrick (1895, Handb. Brit. Lep.: 540, 1928, Rev. Handb. Brit. Lep.: 515), Pierce & Metcalfe (1922, Genit. Tortr. pl. 4), Adamczewski (1936, Ann. Mus. Zool. Pol. 11: 286—8), and Benander (1950, Svensk Insektsf. 10: 44).

Wood (1852, Index. Ent.: 276, fig. 1830) gives an excellent figure of the species but applies the name *pascivana*, a mixture of the two above mentioned names, and in addition Stephens (1852, List Spec. Brit. Anim. 10: 64) treats the species as *Cnephasia passivana* with *pascivana* (*pascuana?*) Hübner as a synonym.

The original name *pasiuana* is very seldom used, but is recently accepted by Kloet & Hincks (1945, Check List Brit. Ins.: 121) treating the species as *pasiuana* Hübner with *pascuana* Hübner as a synonym.

From the above appears that the use of any of the names *pasivana*, *pascivana*, and *passivana* is wrong.

Radical changes in the spelling of an original name in order to obtain linguistic improvements are inadmissible, but in cases where e.g. a wrong letter has appeared caused by an undoubted slip of the pen a



Fig. 1. *Pyralis schumacherana* Fabricius. Holotype ($\times 2$). (Møhl-Hansen phot.)

correction is justified. In this case where the author himself has corrected the error, his statement (Hübner (1825 (1816), Verz. bek. Schmett.: 382)) should be followed, and the correct name applied to this species has to be *Cnephasia pascuana* (Hübner).

2. *Olindia schumacherana* (Fabricius 1787) (*Tortrix ulmana* Hübner 1822/3).

In 1787 Fabricius (Mant. Ins. 2: 236) names and describes *Pyralis schumacherana*, a species occurring in woods near Copenhagen. The description is cited by Gmelin (1788, Linn. Syst. Nat. XIII ed., 1: 2507) as well as by de Villers (1789, Linn. Ent. 4: 530), and is repeated by Fabricius (1794, Ent. Syst. 3 (2): 274).

An attempt to interpret the, very good, description has been carried out, leading Stephens (1852, List Spec. Brit. Anim. 10: 48) to place *Pyralis schumacherana* Fabricius as doubtfully synonymous with *Anisotaenia ulmana* (Hübner), and in this way the species is also quoted by Kloet & Hincks (1945, Check List Brit. Ins. 121) who treat *schumacherana* Fabricius as a doubtful synonym to *Olindia ulmana* (Hübner).

Besides these quotations the name *schumacherana* Fabricius seems not to have been in use in the systematic literature. In the list of Fabrician types of Lepidoptera originating from Danish collections, compiled by Aurivillius (1897, Ent. Tidskr. 18: 139—74), the name *schumacherana* does not occur. Aurivillius adds that the collection in the Zoological Museum of Copenhagen still comprises some species belonging to the

groups *Tortricina* and *Tineina*, which in the future have to be identified by some specialists. Among these specimens the holotype of *Pyralis schumacherana* Fabricius was present. As appears from fig. 1 the specimen is well preserved and easily recognizable as *Olindia ulmana* (Hübner).

If the species e.g. had been treated in the literature dealing with noxious insects, or if other reasons telling against a change of the name could be stated, an application to the International Commission on Zoological Nomenclature proposing to suppress the Fabrician name and to place Hübner's name on the Official List of trivial names would probably be followed, even if the Fabrician type was present. The fact that the Fabrician name as late as in 1945 is quoted, although queried, as synonymous with the right species together with the existence of the holotype and the want of convincing reasons against a change of the name, makes a proposal to the Commission little justified.

It thus seems inevitable that the name *Olindia ulmana* (Hübner 1822/3, Samml. Eur. Schmett. Tortr. pl. 45, fig. 278) in accordance with the rules of priority will have to be sunk to a synonym of *Olindia schumacherana* (Fabricius).¹

3. *Acleris tripunctulana* (Haworth 1811) (*Tortrix lithargyrana* Herrich-Schäffer 1847, *Peronea fissurana* Pierce & Metcalfe 1915).

In 1915 Pierce & Metcalfe (E. Mo. Mag. 51: 325—6) describe *Peronea fissurana*, a species nearly related to and formerly mixed with *P. ferrugana* (auctt.). Figures of the genitalia of both sexes are given by the same authors (1922, Genit. Tortr. pl. 9).

An examination of the genitalia of the material of *Acleris*² 'ferrugana' preserved in various collections on the Continent has later on proved that a large quantity of these specimens belonged to *Acleris fissurana* (Pierce & Metcalfe), which seems to be a widely distributed and, in many districts, common species.

Although the fact that most of the species within the genus *Acleris* are inclined to considerable variation, often makes determination difficult, certain specimens of *fissurana* Pierce & Metcalfe may be determined without any examination of the genitalia. It is true that some forms of the two species come very close to each other, but having determined a rather large material of both species by means of the genitalia,

¹ The species does not feed on *Ulmus* but on various low plants. H. C. F. Schumacher (1757—1830) was a Danish entomologist, vide Henriksen (1924, Ent. Medd. 15: 110—1).

² As the generic name *Peronea* Curtis 1824 unfortunately is preoccupied by *Peronea* Rafinesque 1815 — an emendation of *Peronaea* Poli 1791 in Mollusca — the name to be adopted for the genus *Acalla* auctt. becomes *Acleris* Hübner 1825 (vide Heinrich 1943, Proc. Ent. Soc. Wash. 45: 126).

one gets an eye for the difference in exterior, and is then able to separate as *fissurana* Pierce & Metcalfe specimens having a shining appearance together with a yellowish-ochreous, instead of brownish-ochreous, colour.

A number of different food plants have been mentioned for both species, but it can be stated that specimens bred from *Quercus* or *Fagus* will prove to be *fissurana*, while those feeding on *Betula* are *ferrugana* auctt.

Most of the Danish *fissurana*, separated by means of the genitalia, looked very much like the Danish specimens of *Acleris lithargyrana* (Herrick-Schäffer), and an examination of the genitalia of a number of the latter confirmed their identity with *Acleris fissurana* (Pierce & Metcalfe). The female genitalia of *Acleris lithargyrana* (Herrick-Schäffer) are by W. Petersen (1924, Lep. Faun. Estl. 2: 423) stated to have a peculiar shaped 'Bursa copulatrix mit verhorntem mittlern Teil des ductus bursae', a character peculiar also to *fissurana*. The appearance of the male genitalia is not mentioned. Through the courtesy of Mr. C. S. Larsen, Odense, I have had the opportunity to examine authentical specimens of *lithargyrana* from Graz, Steiermark, Austria, and am able to state that the genitalia of these specimens, male and female, were identical with those figured by Pierce & Metcalfe (1922, Genit. Tortr.: pl. 9) as *fissurana*. The name *fissurana* (1915) Pierce & Metcalfe, being synonymous with *lithargyrana* (1847) Herrich-Schäffer, cannot be maintained.

To decide whether the trivial name *lithargyrana* Herrich-Schäffer (1847 (1849), Syst. Bearb. Schmett. Eur. Tortr.: pl. 4, fig. 23) is to take the place of *fissurana*¹ or not, it becomes necessary to analyze some previous descriptions of species which may be referred to *lithargyrana* (or *fissurana*), viz.:

- (1) *Tortrix ferrugana* Denis & Schiffermüller 1775.
- (2) *Tortrix rufana* Hübner 1796/9.
- (3) *Tortrix tripunctana* Hübner 1796/9.
- (4) *Tortrix tripunctulana* Haworth 1811.
- (5) *Tortrix gnomana* Haworth 1811.
- (6) *Tortrix bifidana* Haworth 1811.
- (7) *Teras ferrugana* Treitschke 1830.
- (8) *Tortrix brachiana* Freyer 1831/3.

re (1) — It is not unlikely that the species listed by Denis & Schiffermüller (1775, Ank. Werk. Schmett. Wienerg.: 128) as *Tortrix ferrugana* belongs here. Treitschke (1830, Schmett. Eur. 8: 263) thus states: 'Hübners sehr gut abgebildete T. Rufana, Fig. 127, befindet sich als T. Ferrugana in zwey Exemplaren (Varietäten einer Art) in der Schiffer-

¹ Benander (1950, Sv. Insektf. 10: 22) being acquainted with the above result treats the species as *lithargyrana* Herrich-Schäffer with *fissurana* Pierce as a synonym.

müller'schen Sammlung.' (As mentioned below *Tortrix rufana* Hübner fig. 127 must be referred to *lithargyrana* Herrich-Schäffer). Besides this Herrich-Schäffer (1851 (1849), Syst. Bearb. Schmett. Eur. 4: 147) himself treats *Tortrix ferrugana* Denis & Schiffermüller as synonymous with his *lithargyrana*. The name *ferrugana* Denis & Schiffermüller ('Rostbrauner W(ickler)') is, however, published without any description and — although accepted by Meyrick (1928, Rev. Handb. Brit. Lep.: 522) as well as by Kloet & Hincks (1945, Check List Brit. Ins.: 122) (by both attached to the species from which *fissurana* Pierce & Metcalfe was separated) — cannot come into consideration, being a *nomen nudum*.

re (2) — The figure of *Tortrix rufana* Hübner (1796/9, Samml. Eur. Schmett. Tortr. pl. 20, fig. 127) is by Herrich-Schäffer (1851 (1849), Syst. Bearb. Schmett. Eur. 4: 147) stated to represent his *lithargyrana* very well. The name is preoccupied by *Tortrix rufana* Denis & Schiffermüller (1775, Ank. Werk. Schmett. Wienerg.: 129) which is another, but congeneric, species.

re (3) — The figure of *Tortrix tripunctana* Hübner (1796/9, Samml. Eur. Schmett. Tortr. pl. 20, fig. 129) — at present treated as an aberration of *Acleris ferrugana* (auctt.) — very clearly shows a characteristic form of *Acleris fissurana* (Pierce & Metcalfe), with shining pale yellow-ochreous ground colour and the costal patch substituted by three sharply defined blackish spots. The name is preoccupied by *Tortrix tripunctana* Denis & Schiffermüller (1775, Ank. Werk. Schmett. Wienerg.: 131) (*Eucosma cynosbatella* (Linné 1758)).

re (4) — The species described by Haworth (1811 (1803), Lep. Brit.: 417) as *Tortrix tripunctulana* is most accurately figured by Wood (1852, Index Ent. pl. 36, fig. 1094). From the description combined with the figure appears that this species is *Acleris fissurana* (Pierce & Metcalfe). Haworth refers the species to *Tortrix tripunctana* Hübner, and his description must be regarded merely as a renaming of that species which, as stated above, undoubtedly belongs to *Acleris fissurana* (Pierce & Metcalfe). Haworth's type is in the British Museum (Natural History) but I have had no opportunity to see it. Mr. I. D. Bradley has, however, kindly selected a specimen as near as possible superficially like the type, and my examination of the genitalia of this specimen confirmed that it belonged to *Acleris fissurana* (Pierce & Metcalfe).

re (5) — From the figure given by Wood (1852, Index Ent. pl. 36, fig. 1093) appears that the species described by Haworth (1811 (1803), Lep. Brit.: 417—8) as *Tortrix gnomania* with reference to *Tortrix gnomania* Linné (first named by Clerck (1764, Icon. Ins.: pl. 4, fig. 13)) possibly may be referred to *Acleris fissurana* (Pierce & Metcalfe).

re (6) — The species described by Haworth (1811 (1803), Lep. Brit.: 418) as *Tortrix bifidana*, and figured by Wood (1852, Index Ent. pl. 36, fig. 1095) might be a variety of *Acleris fissurana* (Pierce & Metcalfe). Mr. I. D. Bradley has also selected a specimen as near as possible super-

ficially like Haworth's type, and my examination of the genitalia of this specimen as well, proved that it belonged to *Acleris fissurana* (Pierce & Metcalfe).

re (7) — The species from which *Acleris fissurana* was separated by Pierce & Metcalfe is at present with no objection considered the same as that described by Treitschke (1830, Schmett. Eur. 8: 263—4) as *Teras ferrugana*. This supposition, however, claims to be proved. The following remarks of Treitschke: 'Die Vorderflügel führen als Grundfarbe ein glänzendes gelbliches Roth', and: 'Der Schmetterling ... fliegt ... zwischen Buchen, erst in Oktober. Ich traf ihn in Sammlungen auch mit dem Namen *Lythargyra*' imply that the species might be not the 'remaining species' but the same as that described by Pierce & Metcalfe as *fissurana*. As appears from the following (vide 4. *Acleris ferrugana* (Treitschke 1830)) *Teras ferrugana* Treitschke is, however, not synonymous with *Acleris fissurana* (Pierce & Metcalfe).

re (8) — *Tortrix brachiana* Freyer (1831/3, Neur. Beitr. Schmett. I: 33, pl. 18, fig. 2) is by Fischer von Röslerstamm (1836 (1834), Abb. Ber. Erg. Schmett.: 42) considered conspecific with *Teras ferrugana* Treitschke. Freyer (op. cit.: 175) in his postscript disproves that argument, stating: 'Herr Fischer Edler von Röslerstamm in Nixdorf will meine Brachiana als Varietät zu Ferrugana Treitschke 8. Bd. S. 263 ziehen ... Wirklich erhielt ich auch erst kürzlich Ferrugana in mehreren Abänderungen von Herrn v. F. zugeschickt, doch glich davon keine meiner Brachiana'. Freyer's figure may represent *Acleris fissurana* (Pierce & Metcalfe) but a clearing up of this problem is not necessary.

Conclusion. — The name *fissurana* Pierce & Metcalfe 1915 must fall, and a change becomes inevitable. Acceptance of the name *lithargyra* Herrich-Schäffer 1847 does not correspond with the rules of priority. The name *Acleris tripunctulana* (Haworth 1811) satisfies this claim and ought to be accepted instead of *lithargyra* Herrich-Schäffer, as well as *fissurana* Pierce & Metcalfe.

4. *Acleris ferrugana* (Treitschke 1830).

As stated above (vide 3. *Acleris tripunctulana* (Haworth 1811)) the species formerly (ɔ: before 1915) known as *Acleris ferrugana* auctt., covers two species showing differences in genitalia, wing colour, and habit of the larva.

While one of these, separated by Pierce & Metcalfe and figured by these authors (1922, Genit. Tortr. pl. 9) as *Peronea fissurana* can be traced back to *Acleris tripunctulana* (Haworth) the correct naming of the 'remaining species', figured by Pierce & Metcalfe (1922, Genit. Tortr. pl. 8) as *ferrugana* is open to question.

The universally used trivial name of this species is still *ferrugana*

with Treitschke as the author. As Treitschke (1830, Schmett. Eur. 8: 263—4) in his description of *Teras ferrugana* does not give any picture and as his description alone does not suffice for solving the problem, the only way to arrive at a definite decision concerning the name is to examine the type.

According to Horn & Kahle (1936, Ent. Beih. 3: 281) Treitschke's European Lepidoptera were included in the collection of the Hungarian Natural History Museum in Budapest. On request of Dr. Tuxen, Dr. Gozmány of the Hungarian Museum stated that Treitschke's type specimens of *Teras ferrugana* still were present there, and consisted of (1) a male, (2) a female, and (3) a specimen without abdomen.

Dr. Gozmány was kind enough to send the bodies of the male and the female for examination. The result of my examination of the genitalia was as follows:

(1) The male (marked Treits 3311) belonged to *Acleris quercinana* (Zeller), a species well characterized by the genitalia, and specifically distinct from *ferrugana* auctt. as well as *fissurana* Pierce & Metcalfe.

(2) The female (marked Treits 3312) belonged to *Acleris ferrugana* auctt., as figured by e.g. Pierce & Metcalfe (1922, Genit. Tortr. pl. 8).

Acleris quercinana is described by Zeller in 1849 (Stett. ent. Z. 10: 283—4) and the consequences of accepting the name *ferrugana* Treitschke for this species instead of for the species now generally known as *ferrugana* auctt. will be most inconvenient.

To avoid these troubles I designate the specimen marked Treits 3312 as the lectotype of *Teras ferrugana* Treitschke 1830.

The oldest description, accompanied by illustrations, which beyond any doubt must be referred to this species is given by Fischer von Röslerstamm (1836 (1834), Abb. Ber. Erg. Schmett.: 40—3, pl. 23—5) who gives excellent figures of 14 specimens of *Teras ferrugana* bred from *Betula* together with figures of the larva and some leaves folded by the larva.

Besides figuring the birch feeding species, Fischer von Röslerstamm mentions another species or variety having a more shining appearance than *ferrugana*: 'frische Stücke haben eine brennend rothgelbe Farbe, wie man sie bei keiner erzogenen Abänderung von Ferrugana, wenn auch in Annäherungen, findet . . . aus Raupen erzogen . . . die auf Rothbuche (Fagus sylvat.) gefunden . . .' This species is undoubtedly *Acleris tripunctulana* (Haworth) (*fissurana* Pierce & Metcalfe). It may be added that Fischer von Röslerstamm, although well acquainted with *A. ferrugana*, makes a mistake, stating that the normally birch feeding species in some districts feeds on *Quercus* (a food plant peculiar to the other species).

As previously mentioned (vide 3. *Acleris tripunctulana* (Haworth 1811), re (1)) the name *Tortrix ferrugana* Denis & Schiffermüller is a *nomen nudum*, and thus invalid.

The correct name of the species from which *Acleris fissurana* was separated by Pierce & Metcalfe becomes *Acleris ferrugana* (Treitschke).

5. *Eucosma tripoliana* (Barrett 1880) (nec. *Grapholitha aemulana* Schläger 1849).

The question of the correct naming of the species described by Barrett (1880, E. Mo. Mag. 17: 82—4) as *Catoptria* (*Grapholitha*) *tripoliana* has not yet come to a definite conclusion.

Barrett's description is very detailed, giving all necessary characteristics of his species including description of the larva and statement of its biology. He also discusses why his species, which feeds exclusively on *Aster tripolium*, a sea-side and salt marsh plant, cannot be identical with another somewhat similar species, feeding on *Solidago virgaurea*. Concerning the latter species he concludes: 'I think, therefore, that I am right in considering the species reared from *Solidago* to be the *aemulana* of Heinemann and, probably, of Schläger also'.

This statement: *tripoliana* Barrett (feeding on *Aster tripolium*) and *aemulana* Schläger (feeding on *Solidago virgaurea*) being two different species was for a long time generally accepted, e.g. by Meyrick (1895, Handb. Brit. Lep.: 487), Staudinger & Rebel (1901, Cat. 2: 114), Spuler (1907 (1910), Schmett. Eur. 2: 277), von Kennel (1913 (1921), Zoolog. 54: 518—9), and still by Hering (1932, Tierw. Mitt. Ergbd. 1: 200).

Pierce & Metcalfe (1922, Genit. Tortr.: 71) agree in regarding the two species as specifically distinct but alter the names, treating *tripoliana* Barrett as synonymous with *aemulana* Schläger and changing the name of the species treated by Meyrick (1895, Handb. Brit. Lep.: 487) as *aemulana* Schläger to *latiorana* Herrich-Schäffer. The figures of the genitalia given by Pierce & Metcalfe (1922, Genit. Tortr. pl. 24) prove that their '*aemulana*' does represent the *Aster tripolium* feeding species, while their *latiorana* represents the *Solidago* feeding species. This statement is accepted by Meyrick (1928, Rev. Hand. Brit. Lep.: 552), and by Kloet & Hincks (1945, Check List Brit. Ins.: 123).

Pierce & Metcalfe do not mention how they have come to their conclusion concerning Barrett's species, but if they have relied upon an examination of the genitalia of 'authentical' specimens of *aemulana* Schläger from the Continent, where both species occur, the said specimens must have been wrongly determined.

Although in his description of *Grapholitha aemulana* (1849, Ber. lep. Tauschv. Jena: 38—40) Schläger does not mention any food plant, his statement: 'Sein Aufenthalt sind Anhöhen, welche mit Gebüsch und höherem Gras bewachsen sind,' is sufficiently distinct to make clear that the question cannot be about a species occurring exclusively in salt marches. Moreover his very detailed description absolutely points to the *Solidago* feeding species. There can therefore be no doubt that

the supposition of Barrett, his species being not conspecific with *aemulana* Schläger, is correct.

The name *Eucosma tripoliana* (Barrett) has to be accepted for the *Aster tripolium* feeding species.

6. *Eucosma latiorana* (Herrich-Schäffer 1848) (*Grapholitha aemulana* Schläger 1849).

As to the *Solidago* feeding species mentioned above (vide 5. *Eucosma tripoliana* (Barrett)) the application of Herrich-Schäffer's name *latiorana* instead of Schläger's *aemulana* corresponds with the rules of priority.

In his publication of *Grapholitha aemulana*, Schläger (1849, Ber. lep. Tauschv. Jena: 38) remarks: 'Herrich-Schäffer hat auf seinen noch nicht ausgegebenen, aber in nächster Zeit zu erwartenden Wicklertafeln unter dem Namen *latiorana* (Tab. 44. Fig. 12)¹ ein Weib abgebildet, diesen Namen jedoch, wie er mir schrieb, wieder eingezogen und den obigen von mir beigelegten angenommen, unter welchem er diese Art in seinem Texte dem Systeme einordnen wird.'

Corresponding with this, Herrich-Schäffer (Syst. Bearb. Schmett. Eur. 4) figures the species as *latiorana* (pl. 44, fig. 312), while he applies the name *aemulana* Schläger in his text (p. 248—9). Against the expectations of Schläger, Herrich-Schäffer's table 44 was, however, published (1848) before Schläger's description appeared on print (1849), and the name *latiorana* Herrich-Schäffer thus became the first published name of the *Solidago* feeding species and then has to be accepted.

1848 *Tortrix latiorana* Herrich-Schäffer, Syst. Bearb. Schmett. Eur. 4, pl. 44, fig. 312.

1849 *Grapholitha aemulana* Schläger, Ber. lep. Tauschv. Jena: 38—40.

1851 *Tortrix (Semasia) aemulana* Herrich-Schäffer, Syst. Bearb. Schmett. Eur. 4: 248—9.

7. *Argyroploce porphyrana* (Hübner 1796/9) (*Poecilochroma pomedaxana* Pierce & Metcalfe 1915).

Based upon their detection of constant differences in the morphology of the genitalia, Pierce & Metcalfe (1915, E. Mo. Mag. 51: 9) established that the species then known as *Poecilochroma profundana* (Fabricius) in reality covered two species, viz. *profundana* Fabricius and another species which they named *pomedaxana*.

Later on Meyrick (1928, Rev. Handb. Brit. Lep.: 578) states that the name *pomedaxana* is 'orthographically impossible' and therefore changes it to *pomedax*.

The two species do not only show differences in the genitalia but may

¹ A misprint for fig. 312.



Fig. 2. *Tortrix porphyra* Hübner. Type figure ($\times 2$).

in most cases be separated by the wing markings alone, the chief feature being the shape and colour of the dorsal patch on the forewing. In *profundana* this patch generally forms a rather regular white spot, while in *pomedaxana* the spot is not white, but more or less dark silvery grey, forming a branched patch or consisting of two spots close to each other. The figure of '*Epinotia profundana*' given by Spuler (1907 (1910), Schmett. Eur. 3, pl. 85, fig. 52) clearly represents *pomedaxana* Pierce & Metcalfe, and among the figures published by von Kennel (1913 (1921), Zoolog. 54, pl. 19) of '*Semasia profundana*' it is beyond doubt that fig. 4 represents *profundana* Fabricius, while fig. 5 is *pomedaxana* Pierce & Metcalfe. As to the very accurate figures of '*Paedisca profundana*' given by Fischer von Röslerstamm (1839 (1834), Abb. Ber. Erg. Schmett., pl. 62) it is evident that fig. 1 a and 1 c show *pomedaxana*, whereas fig. 1 d is *profundana*. It may be mentioned that the figure of '*Poecilochroma aethiopiana*' given by Wood (1852, Index Ent. pl. 30, no. 883) is easily recognizable as *pomedaxana*.

The oldest figure of *Argyroloce pomedaxana* (Pierce & Metcalfe) is, however, published by Hübner (1796/9, Samml. Eur. Schmett. Tortr. pl. 5, fig. 26) as *Tortrix porphyra*. A reproduction of this figure showing exactly the characteristics peculiar to *pomedaxana* is given here (fig. 2).

Although Hübner was perfectly right in considering *porphyra* a distinct species this supposition has not been followed by subsequent